# Information Based Indicia Program (IBIP)

*Questions & Answers*

Q. Why is the Postal Service pursuing the Information Based Indicia Program (IBIP)?

A. IBIP is a solution designed to incorporate technological security requirements for postage metering products and the indicia. It is an integral part of a comprehensive strategy to stem losses from criminal tampering of postage meters, counterfeiting of indicia, and systemic audit and control weaknesses. In order to address revenue risk from all areas, IBIP is part of a revenue protection strategy that encompasses: 1) Secure Metering Devices, 2) New Forms of Secure Postage Evidencing, and 3) Centralized Data Management.

IBIP incorporates technological security features such as digitally signed bar code in the indicia and a secure postage accounting vault to provide greater revenue security while enabling additional benefits to customers and the Postal Service beyond revenue security. It enhances customer convenience with a new access channel for postage which is the ability to print postage using desktop personal computers.

Q. Is this strategy the only solution for revenue protection?

A. It is arguably the only cost effective and viable solution when compared to other proposed approaches which have included disallowing postage meters altogether or investing in automated verification capability to detect counterfeit indicia. Removing postage meters from use would be extremely disruptive to our customers and eliminate a profitable revenue channel for the Postal Service. Automated verification capability would require large, speculative capital investment in scanning equipment. Even with automated scanning, it is impossible to detect counterfeit of today's indicia because there are legitimate duplicates in the mail stream. The IBI solution renders each indicia unique to the mail piece, making it possible to detect duplicates and therefore identify probable counterfeit activity. Furthermore, the infrastructure investment approach for verification capability becomes one that can be cost justified on the basis of quantifiable data and demonstrated need.

Q. What is the IBIP approach for verification capability?

A. Initially, the current random sampling process will be used as an interim strategy for mail piece verification using hand-held scanners. It is believed the volume of IBIP mail pieces in the mail stream for the first two to three years will not be sufficient to justify capital investment required to implement automated scanning. Such investment decisions will become relevant upon market penetration of PC Postage products and statistically significant volume of IBI mail in the mail stream. With such thresholds reached and relevant data captured, infrastructure investment decisions to achieve the maximum benefits available from the IBI will be based on cost/benefit analyses relating to scanning of mail pieces for counterfeit detection, and automation expansion opportunities.

Q. What is the development schedule for this capability?

A. There are three efforts ongoing with regard to IBIP and bar code scanning capability; one to read IBIP codes on the Automated Facer Cancellor System (AFCS), one to read the codes on all bar code sorting machines, and an interim effort to read codes on existing optical character readers (MLOCR). The target is to be able to read codes on-line by the end of the year 2000. Reading them at the AFCS may require a slightly longer time frame, as it may require competing a new machine.

For bar code sorters, there is a development contract to build a new camera which would support scanning IBIP codes at the necessary higher resolution. Testing of that camera is



expected in 1999, with production in the year 2000. An interim measure to scan IBIP codes on mail processed on the MLOCRs is targeted to deploy required software next year.

Q. Does the Postal Service expect this program to save money?

A. The basis of the program is to provide customers with convenient, cost-effective and secure postage while enhancing postage revenue security. We believe that there are revenue opportunities due to an expanded market with new metering systems, as well as the potential increase in use of Postal products such as Express and Priority mail. In addition to countering revenue losses due to fraud and counterfeit, processing cost savings and/or avoidance are projected due to 1) requirement of POSTNET bar code on mailpiece increasing automated mail; 2) increased use of this more profitable revenue channel for Postal Service (lower production, processing and handling costs as compared to other forms of postage); and 3) ability to reset all IBIP devices remotely.

Q. How will IBI benefit customers?

A. IBI can be applied from a personal computer which means enhanced convenience for customers. With the ability to print postage from a personal computer, customers have 24 hour seven days a week access to postage.

Q. Do the specifications exclude MacIntosh Systems?

A. There is no requirement that limits IBIP products to Win only. It will be up to the developers to determine operating system platforms for their products.

Q. Are personal computers the only application for IBI?

A. No. We see the IBI being used in any postage application environment that uses computers. The future automation opportunities that the digitized indicia enables is one of the most exciting aspects of the IBI. The first products are targeted toward personal computers and SOHO customers. We anticipate high volume, high print speed products in the future for use with large mailing systems that may use mainframes or client-server environments to assist in mail production. It is the larger mailing customers that are particularly interested in the value added service opportunities that the bar coded indicia enables.

Q. Why did you include a bar code in the indicia?

A. Bar codes are used in many industries for product identification, shipping and receiving, asset tracking, quality control and inventory management. The Postal Service uses the POSTNET bar code to sort mail, improve mail processing and delivery accuracy and increase productivity. It helps us deliver mail faster and with greater accuracy, which in turn speeds up the business cycle. Specifically, the bar code is included in the IBI to assist in automating the postage validation process and to assist in countering potential fraudulent postage.

Q. What information will be contained in the two dimensional bar code?

A. The IBI will carry information such as device identification number, software identification, date, delivery point code, licensing zip code, postage amount as well as security information to assist in assuring the integrity and origination of the data itself. The IBI specified data elements are classified in terms of **security critical, required for USPS operations** and **performance measurement or value adding** The data elements classified **security**



**critical** are the minimum data elements necessary to ensure each indicium is unique, verifiable as authentic and counterfeit detectable. Data elements classified as **required for operations** are necessary to support existing or future USPS policies and operational functions. The data element classified as "**Performance Measurement & Value Added Services**" represents data that may support evaluation of USPS performance and/or future USPS designated functions.

Q. What purpose does this information serve?

A. It serves many purposes; 1) it makes every indicia unique to the mail piece, supporting our ability to detect counterfeiting, 2) it will provide us with better information to improve mail processing and delivery operations, and 3) due to its capacity to encode additional information, the IBI potentially provides additional benefits to our customers and the Postal Service because it could carry information that has value to the customer and could support the tracking of product, market and related information throughout the mail stream.

Q. The two-dimensional bar code indicia will enable the Postal Service to capture information about who sends and who receives mail. Will this enable the Postal Service to link data about the sender and receiver together in a database? If so, is the Postal Service considering offering this information as a new product for marketing purposes?

A. The Postal Service has no plans to offer any information on individual mailing habits. Trust and protection of the individual are not only protected by law, they are the essence of the Postal Service's long tradition of public service. The protection of individual privacy will drive any decision by the Postal Service on how to use the information provided by the new indicia. This is one reason that the name and address of neither the intended recipient nor the originator is included in the two-dimensional bar code.

Q. How do the products work?

A. Eventually, there will be various designs and approaches available to customers, but the basic premise is that a customer will be able to use commercially available software on their personal computers to download postage and print out envelopes or labels with the proper amount of postage. The USPS levies significantly high security requirements on these products to ensure the security of postage transactions and accounting.

Q. Why are these products more secure?

A. With regard to the indicia, a unique digital signature is created by a security device makes each unique and verifiable as authentic. The fact that each indicia is unique means that duplicates detected in the mailstream indicate a fraud probability. The digital signature is a methodology used to ensure the information in the bar code has not been tampered with or changed in any way from origination. Other technologies have been proposed but cannot offer the same level of security as described here because it cannot ensure every indicia will be unique and does not contain a digital signature to protect authentication assurance.

Postal Service IBIP specifications also require a "Postal Security Device" function as a critical element of products' design. The PSD function is similar to the register function of postage meters today which function like a postage cashbox. Essentially, it ensures secure accounting of how much postage is available for use and how much has been spent on postage. The physical security requirements of this device are that it be "tamper resistant" which basically means that it will cease functioning entirely in the event that it is tampered



with. Postage meters in use today are "tamper evident" which means that it is possible to detect tampering upon examination, but the device will continue to function.

Q. Why doesn't the program permit the use of Smart Cards?

A. The program is prepared to support any IBIP device storing monetary postage values that meets the "tamper resistant" level of security.

Q. How exactly will IBI postage be generated from personal computers?

A. The client software interfaces with postage security functions to generate postage indicia. A customer uses client software to enter data such as address information, the postage rate, the date of the mailing, and the postage amount. The security function accounts for the postage deduction and creation of a digital signature unique to the indicia. The client software translates the information such as postage value, digital signature, license identification, originating ZIP Code, ascending and descending register, and private key into the two dimensional bar code. The software then configures the complete indicia (both the bar code and the human readable portion) and sends this information to the printer to be applied on the mail piece or label.

Q. Will I need a special printer?

A. The IBI can be printed on an envelope or label using any laser or ink jet printer with at least 300dpi resolution.

Q. How will I pay for my postage?

A. The same payment options that are currently available for postage meter customers will be available for PC Postage customers. Currently, postage meter customers are permitted to make payment to the USPS cash management system in one of six ways: check, automated clearinghouse (ACH) debit, ACH credit, wire transfer, debit card (optional) or credit card (optional). The optional payment alternatives require the product vendor to pay merchant fees associated with the transaction and to use their own credit card processor.

Q. How secure will my payment and transaction details be if I purchase postage over the Internet?

A. The entire premise of the program is on enhancing customer convenience while ensuring secure transactions. To ensure system security and integrity, the IBIP specifications incorporate the use of public key digital signing technology, tamper resistant postal security devices, and a USPS based certificate authority for core security functions. All sensitive data is encrypted.

Q. Will I be able to use it for all types of mail?

A. Initially, the use of the products for printing postage is limited to domestic First Class Mail, Priority Mail, Express Mail and parcels. It is not authorized on international mail, registered mail, certified mail or periodicals. The requirement to imbed the delivery point code in the bar code is a security feature that is not extensible to international mail because of the lack of a comparable code; however, we are currently investigating an alternative security approach so that PC Postage can be extended to international mail. Future automation opportunities



afforded by the digitized information of the bar code may also extend PC Postage applicability to accountable mail such as certified and registered, as well.

Q. When will PC Postage products be available?

A. Multiple PC Postage products utilizing the IBI have been received by the Postal Service for evaluation. We follow exhaustive evaluation procedures to determine the products meet or exceed published draft specifications and are secure before field testing which is conducted to operationally test and market analyze product impact before authorizing their national distribution. We have commenced field testing with the first product to meet our security requirements in Northern Virginia with a limited number of customer participants. As certain criteria and thresholds are met we will expand the number of customers and geographic regions. We anticipate that we will be in various stages of field testing of various PC Postage product designs throughout the rest of this year.

Q. Why so long to become available to the public?

A. Relatively speaking, we are making quantum leaps in this program considering the complexities of the required technology, policy and procedures when electronic exchange of monetary values are being designed. The Postal Service first publicly introduced the concept of IBI in 1995, made draft specifications publicly available in 1996, was in receipt of prototypes in 1997 and started field testing in 1998. It took more than 20 years for Pitney Bowes to gain approval for the first postage meter. It took more than seven years for the banking industry to develop the automatic teller machine. The credit card industry has been working on a system to secure electronic transactions for money movement for more than seven years.

Q. What was the IBIP Press event about on March 31?

A. On March 31 in a press event at the National Postal Museum, PMG Marvin Runyon officially introduced the IBI as a new form of evidencing postage and the “E-Stamp Internet Postage” product as the first one to be authorized to proceed into field (BETA) testing.

Q. Who are the stakeholders involved in this program?

A. The primary stakeholders in this program are the Postal Service, Product/Service Providers, and the Customers. Although relationships are more complex with the expanding number of players and new markets, there is really no change to the Postal Service mission associated with this project or current events. As we have historically done with postage meters, the Postal Service specifies requirements, evaluates and authorizes products to print evidence of postage. Commercial companies assume the cost of research and development, and develop products based on market research and an anticipated market for their products. The Postal Service evaluates products to assure postage revenue protection and acts as an honest broker with regard to customer interests.

Q. If these are commercially developed products, what is the role of the Postal Service?

A. The Postal Service specifies the functional and security requirements of the indicia and specific product features as well as the design interface requirements to USPS automated tracking systems that are also a part of the security strategy. Our program approach is characterized by public meetings, public documentation and active participation by industry groups and academia. We develop requirements by publishing proposed draft documents in the Federal Register and requesting public comments. We hold public meetings to review



technical issues associated with draft requirements, policies and other documents, and incorporate feedback and public comments as appropriate into a revision. The procedures for product submission and evaluation follow the same Federal Register process as well.